VERNON MALONE
COLLEGE AND CAREER ACADEMY

PROJECT TITLE: Standing Stones

COURSE: Math 3 Honors

INSTRUCTOR: Ms. Grismer

DRIVING QUESTION

How can we research and analyze the geometry of a stone circle, and then apply mathematical principles to create an accurate equation that represents the shape and structure of the circle? And how can we use centers of triangles to assist us in this process?

PROJECT SUMMARY

Students will choose a Stone Circle to research. They will use Google Earth to get latitude and longitude coordinates. Using skills learned in Unit 1, they will find the circumcenter, which is the center of the circle. This will help them determine the equation of the circle. They will also highlight any other features of the stone circle that could represent other line segments within the circle, like chords and tangent lines. They will finally finish the project by creating a video that highlights the stone circle, including the history and any other interesting facts.

REAL-WORLD CONTEXT

Students are choosing a known stone circle (think Stonehenge) to learn more about. Like why was it created? How do historians think it was built? What was it used for, etc...

PRODUCTS & AUDIENCE

Students created a poster for atrium display.

STUDENT REFLECTIONS

- "The part of the group contract that was the most helpful was when we had to identify our strengths since we focused on what we were good at."
- "It was interesting to use geometry in the real world and apply it to places and actual real circles, not just paper."

NC PORTRAIT OF A GRADUATE SKILLS GAINED

COLLABORATION
COMMUNICATION
CRITICAL THINKING
PERSONAL RESPONSIBILITY
LEARNER'S MINDSET

TEACHER REFLECTION

The Standing Stones Circle Project provided students with a meaningful opportunity to apply geometric concepts to real-world historical structures. By determining an equation of a stone circle of their choosing, students moved beyond procedural work and into authentic mathematical investigation. This project allowed them to explore how geometry can be used to model and understand cultural landmarks, which increased both engagement and curiosity.

One of the most valuable outcomes was students' ability to connect this work back to Unit 1 concepts on centers of triangles. Many students naturally revisited ideas involving circumcenters and perpendicular bisectors when determining circle equations, demonstrating that prior learning had been retained and could be transferred to new contexts. Seeing students make these connections independently showed growth in their conceptual understanding rather than just memorization of formulas.